

## CLAIMS

1. An engine valve seat with a plating layer formed on a surface of a valve seat main body provided at a mounting reception portion provided at an air inlet or air outlet of a cylinder head.

2. An engine valve seat with a plating layer formed on at least that surface of a valve seat main body, provided at a mounting reception portion provided at an air inlet or air outlet of a cylinder head, which faces said receiving portion.

3. The engine valve seat according to claim 1 or 2, wherein a standard electrode potential of said plating layer is set between an electrode potential of said valve seat main body and an electrode potential of said mounting reception portion.

4. An engine cylinder head having a valve seat provided at a mounting reception portion provided at an air inlet or air outlet of the cylinder head, wherein a plating layer is formed on a surface of said mounting reception portion.

5. An engine cylinder head having a valve seat provided at a mounting reception portion provided at an air inlet or air outlet of the cylinder head, wherein a plating layer is formed on that surface of said mounting reception portion which faces said valve seat.

6. The engine cylinder head according to claim 4 or 5, wherein a standard electrode potential of said plating layer is set between an

electrode potential of said valve seat and an electrode potential of said mounting reception portion.

7. An engine cylinder head having a valve seat provided at a mounting reception portion provided at an air inlet or air outlet of the cylinder head, wherein plating layers are formed on both a surface of said mounting reception portion and a surface of said valve seat.

8. An engine cylinder head having a valve seat provided at a mounting reception portion provided at an air inlet or air outlet of the cylinder head, wherein a plating layer is formed on that surface of said mounting reception portion which faces said valve seat, and a plating layer is formed on that surface of said valve seat which faces said mounting reception portion of said valve seat.

9. The engine cylinder head according to claim 7 or 8, wherein a material for said plating layer of said mounting reception portion and a material for said plating layer of said valve seat are provided in such a manner that electrode potentials equal or approximately equal to each other, or an electrode potential of said aluminum-based cylinder head, an electrode potential of said plating layer of said mounting reception portion, an electrode potential of said plating layer of said valve seat, and an electrode potential of said iron-based valve seat, increase in that order.

10. An engine valve seat with an insulating layer formed on a surface of a valve seat main body provided at a mounting reception portion provided at an air inlet or air outlet of a cylinder head, wherein said valve seat main body is made of an iron-based alloy, and said

insulating layer is an iron oxide film.

11. An engine valve seat with an insulating layer formed on that surface of a valve seat main body, provided at a mounting reception portion provided at an air inlet or air outlet of a cylinder head, which faces said mounting reception portion, wherein said valve seat main body is made of an iron-based alloy, and said insulating layer is an iron oxide film.

12. A method of manufacturing a valve seat provided at a mounting reception portion provided at an air inlet or air outlet of a cylinder head, wherein after an insulating layer is formed on an entire surface of a valve seat main body, said valve seat main body is mounted in said mounting reception portion after which said insulating layer on a seat surface of said valve seat main body is removed, and said seat surface is processed.

13. The valve seat manufacturing method according to claim 12, wherein said valve seat main body is made of an iron-based alloy, and an iron oxide film is formed as said insulating layer by steaming the surface of said valve seat main body.

14. An engine valve seat with a coating layer for electrical insulation formed on a surface of a valve seat main body provided at a mounting reception portion provided at an air inlet or air outlet of a cylinder head.

15. An engine valve seat with a coating layer for electrical insulation formed on at least that surface of a valve seat main body,

provided at a mounting reception portion provided at an air inlet or air outlet of a cylinder head, which faces said mounting reception portion.

16. An engine cylinder head having a valve seat provided at a mounting reception portion provided at an air inlet or air outlet of a cylinder head, wherein a coating layer for electrical insulation is formed on a surface of said concaved mounting reception portion.

17. The engine valve seat according to claim 14 or 15, wherein said coating layer is a ceramic coating layer.

18. The engine cylinder head according to claim 16, wherein said coating layer is a ceramic coating layer.

19. The engine valve seat according to claim 14 or 15, wherein said coating layer is a polytetrafluoroethylene resin layer.

20. The engine cylinder head according to claim 16, wherein said coating layer is a polytetrafluoroethylene resin layer.

21. The engine cylinder head according to claim 16, wherein said cylinder head is made of an aluminum alloy, and said coating layer is an alumite treated layer.